

Waste Management FACTSHEET



Order No. 383.100-3
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FIELD STORAGE OF SOLID AGRICULTURAL WASTE

"FIELD STORAGE": means a temporary stock of agricultural waste ready to be drawn upon for use as crop fertilizer or soil conditioner.

"AGRICULTURAL WASTE": includes manure, used mushroom medium and agricultural vegetation waste.

INTRODUCTION

The above definitions are taken from the *Code of Agricultural Practice for Waste Management* contained in the *Environmental Management Act*. The Code describes practices for managing agricultural waste in an environmentally acceptable manner.

Agricultural waste, when properly used, can be a valuable addition to a farming operation's resource system. It can be an excellent fertilizer and will improve soil characteristics by adding organic matter. Agricultural waste (manure) may contain a vast array of organisms that add to the biological activity of soils, however, when not managed with sufficient care, the nutrients and bacteria can be a major source of pollution to watercourses (ditches and streams) and domestic water supplies (wells and groundwater).

The Code explains that agricultural waste **must** be stored:

- in a storage facility;
- as field storage, or
- under the pens of fur bearing animals

This factsheet will deal with **field storage** of solid agricultural wastes.

STORAGE PERIOD OF AGRICULTURAL WASTE

There are two distinct field storages described in the Code. A **short-term** storage of two weeks or less and a **long-term** storage of up to nine months. The short-term storage is used when solid agricultural waste is delivered to field storage and will be used as a fertilizer within two weeks of arrival. There must be a reasonable setback from the storage site to a watercourse and wastes must not be left on creek banks or slopes that lead to a creek bank. When properly located, and used only during the dry times of the year, there is a low potential for leachate and runoff occurring from short-term storage over the two week time period.

A longer-term field storage time is allowed if the waste is:

- Stored for no longer than nine months in the field;
- located at least 30 metres (100 feet) from a watercourse, a well, or source of water used for domestic purpose and,
- stored in a manner that prevents the escape of agricultural wastes that cause pollution.

To keep solid agricultural wastes from causing pollution, the waste needs to be kept dry for the full storage period. Keeping the wastes out of any surface water and covered is the key to keeping it dry.

COVERED FIELD STORAGE

In areas of the province, including the Fraser Valley and Vancouver Island, that receive a total average precipitation greater than 600 millimetres (24 inches) during the months of October to April inclusive, field stored solid agricultural waste, except vegetation waste, **must** be covered from October 1 to April 1 inclusive to prevent the escape of agricultural waste that causes pollution. Covering can be as simple as a tarp or plastic cover or as elaborate as a roof. Often agricultural waste becomes available for spreading on the land at a time when the nutrient value cannot be put to work. The land is too wet to get onto, the crop or pasture is not growing, the risk of water running off the field is too great, etc.

The following is a procedure for proper agricultural waste storage where the length of storage includes the months of October to April and the rainfall is greater than 600 millimetres (24 inches). It is simple and requires little time.

- Select a location for the pile that is above the winter high water level and is more than 30 metres (100 feet) from the watercourse.
- Windrow the agricultural waste. If a single row is longer than 25 metres (83 feet) it may be beneficial to place two rows side by side.

- Strike off the tops of the windrows. If there are two windrows, fill in the gaps between them (see Figure 1).

NOTE: This step is important. If it is not done, water will collect in the pockets and it will be hard to remove the protective plastic cover that goes on next.

- Arrange 6 mil black plastic over the pile and place tires along the top and sides of the windrow, spacing them about 2.5 to 3 metres (8 to 10 feet) apart down the length of the pile and about ½ to 1 metre (2 to 3 feet) apart going across it (see Figure 2).

If tires are tied together, the string will help to hold down the plastic and fewer tires are needed. Tie tires together with plastic string over the pile at 2.5 to 3 metres (8 to 10 feet) intervals with the tires touching the ground on each side of the pile, the result is a lacing effect.

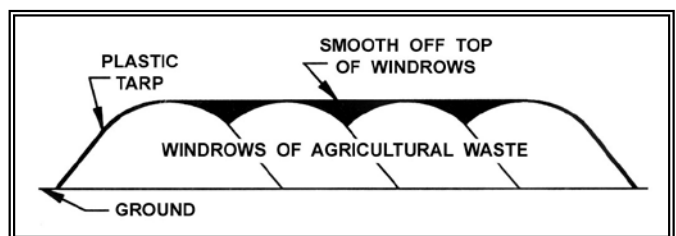


Figure 1 Windrows of Agricultural Waste

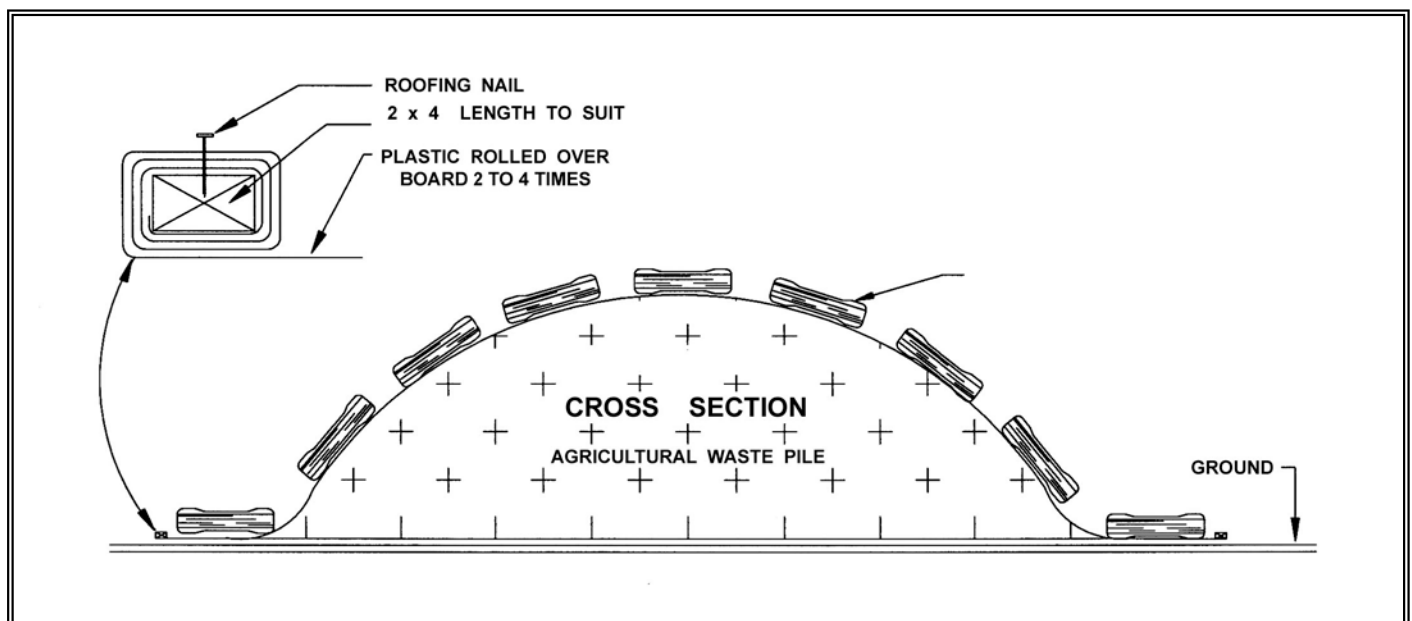


Figure 2 Cross Section of Storage Pile with Plastic Cover

- Next, place 2 x 4's along the edge of the plastic, wrapping the plastic around the 2 x 4's and securing with a wide headed nail (roofing or foam board nail). Space the 2 x 4's at approximately 1 metre (3 feet) intervals (see Figure 2 and 3).
- When it is time to use the stored agricultural waste, remove the tires and roll up the plastic from one side to the other. The plastic may then be folded lengthwise and stored at the site until needed again. (see Figure 4 and 5)

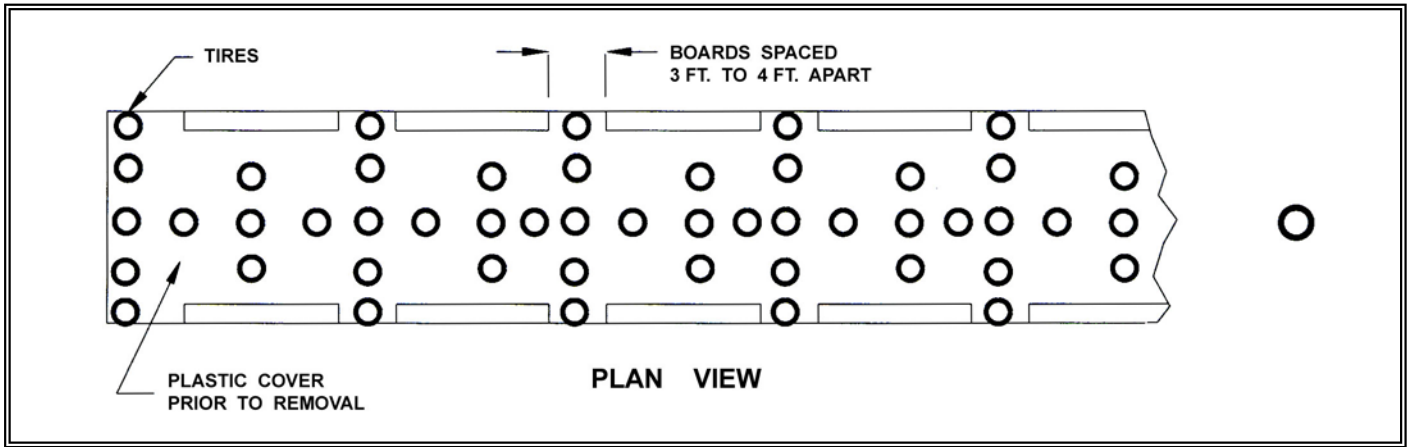


Figure 3 Covered Pile

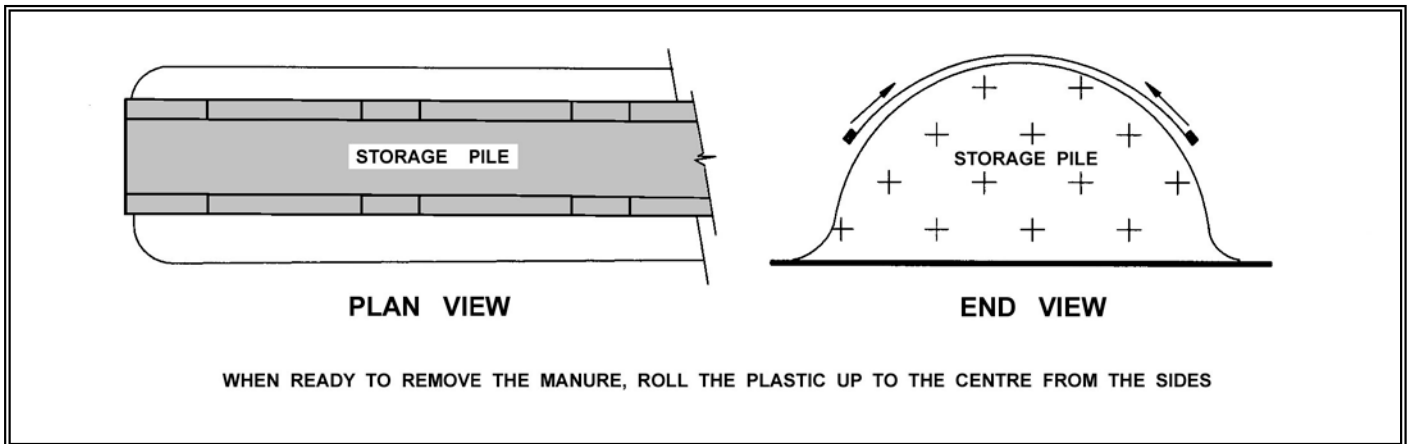


Figure 4 End View of Storage Pile

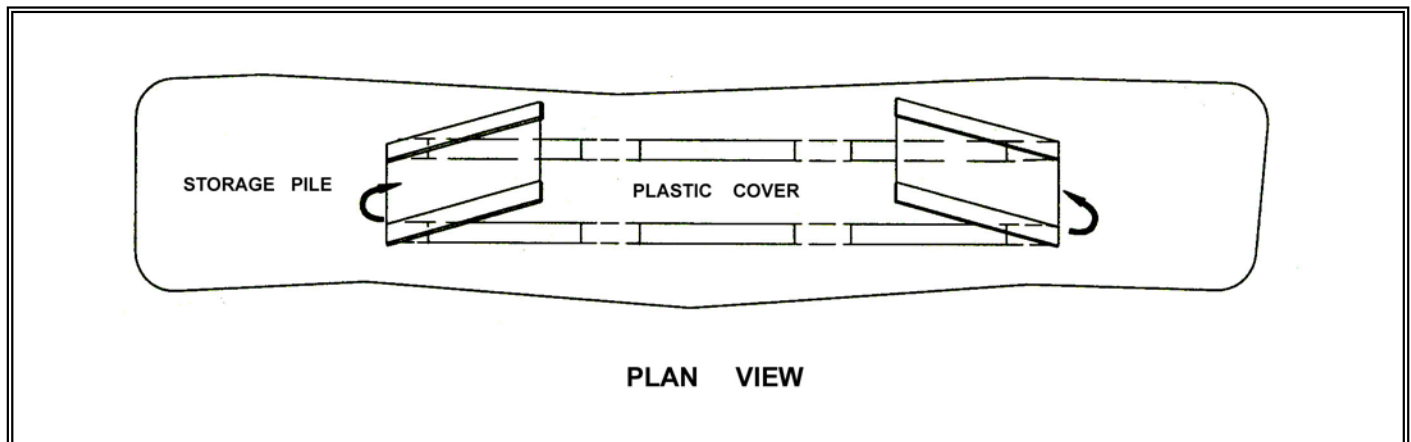


Figure 5 Removal of Plastic Cover by Folding the Ends Toward the Middle

- For small agricultural waste piles that are to be covered for field storage, an optional cover installation is shown below (see figure 6).
- This installation shows the edges of the cover backfilled by soil and the cover held down by tires and plastic string or rope. In some areas, one or the other of these methods will be adequate to secure the plastic. In areas where there is more wind, additional tires and rope may be required to secure the tarp or plastic.

A bed of hog fuel or shavings can be placed on the surface of the ground before covering with agricultural waste. This is done to raise the waste off of the ground and to provide easier front-end loader removal and limiting the potential to disturb the surface on removal. The woodwaste is then incorporated into the agricultural waste and land spread.

Caution: Gas can accumulate within the pile if it is covered with a tarp for extended period of time and the tarp does not allow to breathe (or release gas). Take caution to avoid breathing in accumulated gas when removing the tarp or disturbing the manure.

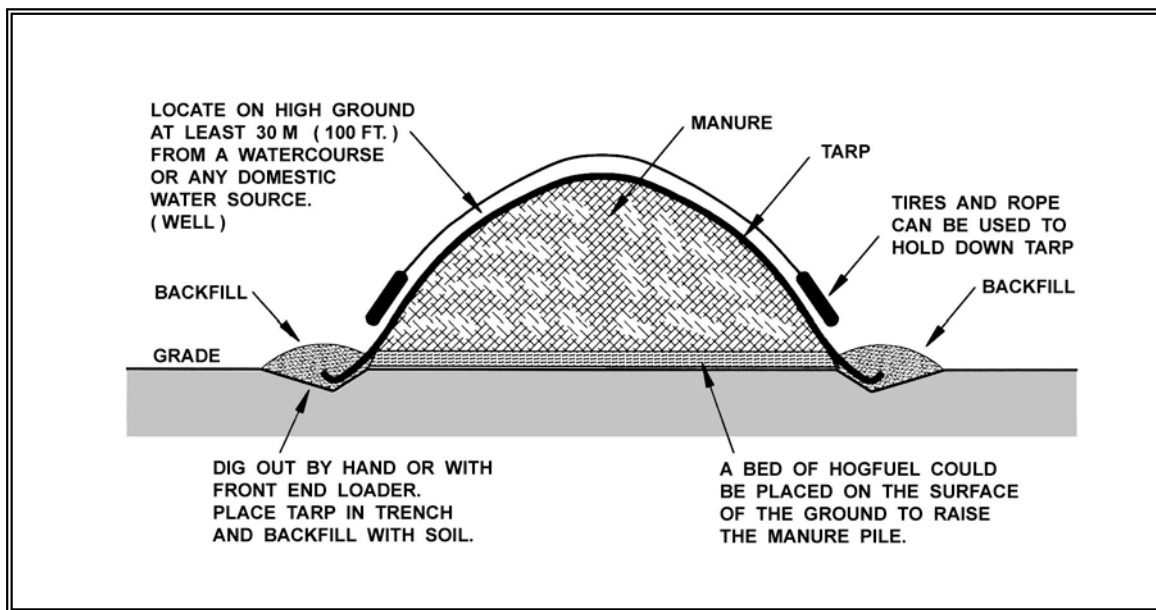


Figure 6 Optional Cover Installation

FOR FURTHER INFORMATION CONTACT

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